UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1 – NEW ENGLAND

IN THE MATTER OF:

NEWPORT BIODIESEL, INC. 312 Connell Highway Newport, Rhode Island 02840 Proceeding under the Clean Air Act, 42 U.S.C. §§ 7401-7671q	)	**NOTICE OF VIOLATION**

I. INTRODUCTION

1. The United States Environmental Protection Agency ("EPA"), Region 1 issues this Notice of Violation ("NOV") to Newport Biodiesel, Inc. ("Newport Biodiesel") for the failure to identify hazards that may result from accidental releases of extremely hazardous substances using appropriate hazard assessment techniques and the failure to design and maintain a safe facility taking such steps as are necessary to prevent such releases, in violation of Section 112(r)(1) of the Clean Air Act ("CAA"), 42 U.S.C. § 7412(r)(1).

II. STATUTORY AND REGULATORY AUTHORITY

2. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), owners and operators of stationary sources producing, processing, handling or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance, have a general duty to (a) identify hazards which may result from accidental releases of such substances using appropriate hazard assessment techniques; (b) design and maintain a safe facility taking such steps as are necessary to prevent releases; and (c) minimize the consequences of accidental releases that do occur. Section 112(r)(1) of the CAA is referred to as the "General Duty Clause."

3. The term "stationary source" is defined by Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C), in pertinent part, as any buildings, structures, equipment, installations or substance-emitting stationary activities, located on one or more contiguous properties under the control of the same person, from which an accidental release may occur.

4. The term "extremely hazardous substance" means an extremely hazardous substance within the meaning of the CAA's General Duty Clause. Such substances include any chemical which may, as a result of short-term exposures associated with releases to the air, cause death, injury or property damage due to its toxicity, reactivity, flammability or corrosivity.[1] The release of any substance that causes death or serious injury because of its acute toxic effect or as a result of an explosion or fire or that causes substantial property damage by blast, fire, corrosion, or other reaction would create a presumption that such substance is extremely hazardous.[2] The term includes, but is not limited to, regulated substances listed in Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), and 40 C.F.R. § 68.130.

5. The term "accidental release" is defined by Section 112(r)(2)(A) of the CAA, 42 U.S.C. § 7412(r)(2)(A), as an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.

III. GENERAL ALLEGATIONS

6. Newport Biodiesel is a Rhode Island corporation, and thus is a "person" as defined by Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

7. Newport Biodiesel produces biodiesel at a facility operated by Newport Biodiesel at 312 Connell Highway in Newport, Rhode Island (the "Facility").

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[1] *See* Senate Committee on Environment and Public Works, Clean Air Act Amendments of 1989, Senate Report No. 228, 101st Congress, 1st Session 211 (1989).
[2] *Id.*

8. The Facility is located within a quarter-mile of a motel, a community college, a school, a playing field, a Boys and Girls Club, and residential homes. The Facility is located within a half-mile of a shopping center, two U.S. Naval schools and other U.S. Naval facilities, a community health center with a Head Start program, and many more residential homes.

9. Newport Biodiesel started construction at the Facility in June 2007 and began producing and selling biodiesel in January 2008.

10. The Facility currently consists of two leased buildings -- known as the "Blue Building" and the "Yellow Building," -- and leased outdoor space adjacent to these buildings. Newport Biodiesel has leased and operated in the Blue Building since 2007. Newport Biodiesel has leased and operated in the Yellow Building since 2012.

11. Newport Biodiesel uses methanol, sodium methylate (in a 30% solution), and other chemicals in its biodiesel production processes at the Facility.

12. In 2010, Newport Biodiesel used approximately 520,555 pounds (78,872 gallons) of methanol and approximately 96,160 pounds of sodium methylate at the Facility.

13. In 2011, Newport Biodiesel used approximately 756,030 pounds (114,550 gallons) of methanol and approximately 73,900 pounds of sodium methylate at the Facility.

14. In 2012, Newport Biodiesel used approximately 1,425,059 pounds (215,918 gallons) of methanol and approximately 171,212 pounds of sodium methylate at the Facility.

15. During 2012, Newport Biodiesel stored at the Facility a maximum amount of 136,000 pounds of methanol at any one time, and an average amount of methanol of 43,095 pounds; it also stored a maximum amount of 30,000 pounds of sodium methylate, and an average amount of sodium methylate of 12,000 pounds. *See* Newport Biodiesel's EPCRA-required "Tier Two Report" for 2012.

16. During 2013, Newport Biodiesel stored at the Facility a maximum amount of 136,975 pounds of methanol at any one time, and an average amount of methanol of 59,073 pounds; it also stored a maximum amount of 30,000 pounds of sodium methylate, and an average amount of sodium methylate of 12,000 pounds. *See* Newport Biodiesel's EPCRA-required "Tier Two Report" for 2013.

17. On June 20, 2013, EPA Region 1 conducted an inspection of the Facility that focused on Newport Biodiesel's compliance with Section 112(r) of the CAA and the Emergency Planning and Community Right-to-Know Act ("EPCRA").

18. On September 12, 2014, EPA Region 1 issued a CAA Reporting Requirement to Newport Biodiesel regarding the Facility's compliance with Section 112(r) of the CAA. Newport Biodiesel provided its responses to the Reporting Requirement on November 6, 2014.

19. At the time of EPA Region 1's June 2013 inspection, there were two 10,000 gallon methanol storage tanks and one 3,000 gallon storage tank for sodium methylate solution (30% sodium methylate in methanol, known as "sodium methylate 30%") located outside the Facility's Blue Building. In addition, there were eight 55-gallon drums containing methanol and six totes of sodium methylate 30% (1,500 pounds each) stored inside the Blue Building.

20. During the biodiesel manufacturing process, which takes place primarily in the Blue Building, methanol and sodium methylate 30% are reacted with waste vegetable oil to produce biodiesel, with glycerin as a byproduct.

21. Methanol, sodium methylate 30%, biodiesel, waste vegetable oil, and glycerin are all flammable or combustible liquids. The National Fire Protection Agency ("NFPA") classifies methanol as a Class IB flammable liquid, sodium methylate 30% as a Class IC flammable liquid;

and biodiesel, waste vegetable oil and glycerin as Class IIIB combustible liquids. *See* NFPA 30, *Flammable and Combustible Liquids Code,* (2008 ed.) § 4.3.[3]

22. Methanol and sodium methylate 30%, either alone or co-located with each other, are chemicals that may, as the result of short-term exposures associated with releases to the air, cause death, injury or property damage due to their toxicity, reactivity, flammability, volatility, and/or corrosivity.

23. Specifically, methanol is a flammable, easily ignitable liquid that burns in air. Methanol stays flammable even when mixed with large quantities of water – a 75% water, 25% methanol mixture is still a flammable liquid. In addition, methanol is toxic: ingestion of one to two ounces of methanol can cause death, and smaller amounts can cause blindness.

24. Sodium methylate is a flammable, toxic and corrosive solid. Sodium methylate 30%, a solution of 30% sodium methylate by weight in methanol, is flammable, toxic and corrosive. Sodium methylate 30% is toxic by ingestion, inhalation, and skin contact. It can cause eye and skin burns, blindness, respiratory failure, and death. Sodium methylate 30% reacts violently with water, and the reaction may release flammable and/or toxic gas.

25. Accordingly, both methanol and sodium methylate 30% are "extremely hazardous substances" within the meaning of the CAA's General Duty Clause.

26. The unanticipated emission of methanol and sodium methylate 30%, either alone or in combination, into the ambient air from the Facility would constitute an "accidental release" as that term is defined by Section 112(r)(2)(A) of the CAA, 42 U.S.C. § 7412(r)(2)(A).

27. The Facility is a building or structure from which an accidental release may occur, and is therefore a "stationary source" as that term is defined Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C).

[3] The 2015 edition of this code contains the same classifications.

28. Newport Biodiesel is the "operator" of a stationary source as that term is defined by Section 112(a)(9) of the CAA, 42 U.S.C. § 7412(a)(9).

29. As the operator of a stationary source that processes, handles or stores extremely hazardous substances, Newport Biodiesel is subject to the CAA's General Duty Clause.

30. EPA's *Guidance for Implementation of the General Duty Clause Clean Air Act Section 112(r)(1)* (May 2000) ("General Duty Clause Implementation Guidance"), found at http://www.epa.gov/osweroe1/docs/chem/gdcregionalguidance.pdf, focuses on the General Duty Clause and its implementation to promote safe operating practices and prevent chemical accidents. Chapter 2 of this guidance describes the applicability of the General Duty Clause and the obligations it imposes on owners and operators of stationary sources that process, handle, or store extremely hazardous substances.

31. Due to the hazardous nature of methanol, the Methanol Institute, a trade association of companies that distribute and use methanol, has issued the *Methanol Safe Handling Manual* ("MSH Manual"), dated January 2013, a standard outlining the recognized and generally accepted good engineering practices for the methanol industry.

32. In collaboration with the American National Standards Institute, the American Society of Mechanical Engineers ("ASME") has issued ASME A13.1-2007: *Scheme for the Identification of Piping Systems* ("ASME A13.1-2007"), a standard outlining the recognized and generally accepted good engineering practices for identifying hazardous materials conveyed in piping systems and their hazards when released into the environment. This standard is consistently relied on by industry experts to identify piping that conveys hazardous materials in order to better assess and minimize related hazards.

33. The Center for Chemical Process Safety of the American Institute of Chemical Engineers ("CCPS") has issued *Guidelines for Safe Warehousing of Chemicals* (1988) ("CCPS Guidelines"), a set of guidelines designed to address the identification of potential hazards associated with the warehouse storage of chemicals in various container and packaging systems. This standard is consistently relied on by industry experts to identify potential hazards in chemical warehousing operations in order to minimize risk to employees, the surrounding population, the environment, property, and business operations.

34. The NFPA has developed NFPA 1, *Fire Code* ("NFPA 1"), which outlines recognized and generally accepted good engineering practices necessary to establish a reasonable level of fire and life safety and property protection from the hazards created by fire, explosion, and dangerous conditions. This code is consistently relied on by industry experts to identify, assess, and minimize such hazards, and is incorporated into the Rhode Island Fire Safety Code. *See* Rhode Island Fire Safety Code Section 7, incorporating NFPA 1 (2012 ed.).

35. The NFPA also has developed NFPA 30, *Flammable and Combustible Liquids Code* ("NFPA 30") (2008 ed.), which outlines recognized and generally accepted good engineering practices to provide fundamental safeguards for the storage, handling, and use of flammable and combustible liquids, and is incorporated by reference in NFPA 1. NFPA 1 (2012 ed.) § 66.1.1.

36. The International Code Council has issued the International Building Code ("IBC") (2012 ed.), which outlines minimum safeguards that are recognized and generally accepted good engineering practices for the design and installation of building systems in order to address, among other things, conditions hazardous to life and property from fire, explosion, and other hazards, and to provide safety to fire fighters and emergency responders during

emergency operations. This code is consistently relied on by industry experts to safeguard public health and safety through building design and installation, and is incorporated into the Rhode Island State Building Code. *See* Rhode Island State Building Code, Regulation SBC-1 (2013).

37. After the June 2013 inspection, Newport Biodiesel retained Hughes Associates, Inc., to evaluate the Blue Building's compliance with Rhode Island State Building and Fire Codes. By letter dated July 30, 2013, Hughes Associates provided its code compliance review ("Code Review") for the Blue Building to Newport Biodiesel.

38. After the June 2013 inspection, Newport Biodiesel also retained Irwin Engineers to conduct a hazard analysis for its biodiesel manufacturing processes, including its use of methanol and sodium methylate 30% at the Facility. Newport Biodiesel obtained a process hazard analysis ("PHA") for its processes from Irwin Engineers on September 18, 2013.

IV. SPECIFIC VIOLATIONS

A. FAILURE TO IDENTIFY HAZARDS

39. Pursuant to the General Duty Clause, owners and operators of stationary sources producing, processing, handling, or storing extremely hazardous substances have a general duty to identify hazards which may result from accidental releases of such substances, using appropriate hazard assessment techniques. Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

40. The recommended industry practice and standard of care for businesses that handle, store, and use methanol and/or sodium methylate 30% is to conduct a hazard analysis to assess the hazards of all aspects of processes involving the flammable or combustible liquids by using appropriate techniques. *See, e.g.*, MSH Manual, Chapter 5, pp. 44, 50-51 (hazard analyses

should be conducted on all aspects of the process using appropriate analytical techniques); NFPA 1 (2012 ed.) §§ 66.6.4.1, 66.6.4.2 (hazard analysis required for operations involving flammable and combustible liquids to ensure that fire and explosion hazards are addressed); General Duty Clause Implementation Guidance, pp. 12-13 (duty to identify hazards requires determining intrinsic chemical hazards, the risks of accidental releases, and the potential effect of releases on the public and environment).

41. As described above in Section III, Newport Biodiesel has processed, handled and/or stored, and continues to process, handle and/or store, large quantities of methanol and sodium methylate 30% at the Facility in its biodiesel manufacturing processes.

42. Accordingly, Newport Biodiesel has been and is required to identify hazards which may result from accidental releases of methanol and sodium methylate 30% by conducting a hazard analysis using appropriate hazard assessment techniques.

43. From no later than January 2008 until several months after EPA Region 1's inspection in June 2013, Newport Biodiesel had not conducted a hazard analysis for processes using methanol or sodium methylate 30% at the Facility. Newport Biodiesel obtained a PHA for its processes using methanol and sodium methylate 30% from Irwin Engineers on September 18, 2013.

44. Accordingly, from no later than January 2008 until September 18, 2013, Newport Biodiesel failed to identify hazards as required by the CAA's General Duty Clause.

B. FAILURE TO DESIGN AND MAINTAIN A SAFE FACILITY

45. Pursuant to the General Duty Clause, owners and operators of stationary sources producing, processing, handling or storing extremely hazardous substances have a general duty

to design and maintain a safe facility taking such steps as are necessary to prevent accidental releases of such substances. Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

Failure to Install Fire Suppression System

46. During EPA Region 1's inspection in June 2013, EPA personnel observed various potentially unsafe conditions at the Facility, including the lack of a fire suppression system in the Blue Building.

47. As alleged above in Section III, at the time of the June 2013 inspection the Blue Building contained drums and containers of methanol and sodium methylate 30%, which are both flammable liquids. Also in the Blue Building were various biodiesel process tanks, including the pretreatment reactor and biodiesel reactor tanks, which contain methanol and/or sodium methylate 30% during the Facility's biodiesel manufacturing processes.

48. The recommended industry practice and standard of care for facilities that handle, store and use flammable liquids is to provide a fire suppression system, the design of which is based on the amount of and the specific hazards posed by the flammable liquids in the area. *See, e.g.*, IBC (2012 ed.) §§ 307, 903.2.5 (buildings that contain large quantities of high hazard materials, including flammable liquids, must generally be provided with automatic sprinkler systems for fire suppression).[4]

49. At the time of EPA Region 1's inspection in June 2013, there was no automatic fire suppression system in the Blue Building, and no automatic fire suppression system has been installed there from 2008 through 2014.

[4] As stated above in NOV Paragraph 36, the IBC (2012 ed.) is incorporated into the Rhode Island State Building Code. The IBC (2006 ed.) contains similar citations regarding fire suppression in such buildings. *See* IBC (2006 ed.) §§ 307, 903.

50. Newport Biodiesel's Code Review, provided by Hughes Associates, Inc., recommended that Newport Biodiesel either reduce the quantity of flammable liquids in the Blue Building or install an automatic sprinkler system. *See* Code Review, pp. 5-6.

Failure to Properly Label Pipes Containing Flammable or Other Hazardous Substances

51. During EPA Region 1's inspection in June 2013, EPA inspectors observed various pipes at the Facility containing flammable or other hazardous substances that were not labeled to identify their contents or direction of flow.

52. In order to understand the hazards that could result from an accidental release and to minimize the likelihood of a release, piping that contains hazardous materials should be labeled to identify the pipes' contents and direction of flow.

53. The recommended industry practice and standard of care is to label all piping containing hazardous materials to indicate the contents, direction of flow, and any additional details necessary to identify hazards. *See, e.g.*, ASME A13.1-2007 (establishes common scheme for identifying contents of piping systems, including those containing flammable and combustible materials); NFPA 1 (2012 ed.) § 60.5.1.6.2(2) (referencing ASME A13.1); MSH Manual, Chapter 3, p. 24 ("all piping and valves subject to carrying methanol should be consistently labeled, and direction of flow should be indicated").

54. During EPA Region 1's June 2013 inspection, none or almost none of the piping containing hazardous materials in the Blue Building was labeled for contents and direction of flow, including piping connected to tanks and containers of methanol and sodium methylate 30%, and piping connected to the biodiesel process tanks, including the pretreatment tank, the biodiesel reactor tank, glycerin recovery and storage tanks, and methanol recovery tanks. The unlabeled piping connected to each of these containers and tanks contains methanol, sodium

methylate 30%, glycerin, waste vegetable oil and/or biodiesel during various stages of the biodiesel manufacturing process.

55. Newport Biodiesel's PHA, provided by Irwin Engineers, listed as a "high priority" recommendation that pipes throughout the Facility be labeled to identify their contents. See PHA, p. 4, Item #11.

Failure to Separate Incompatible Chemicals

56. During EPA Region 1's inspection in June 2013, EPA inspectors observed eight 55-gallon drums containing methanol that were stored in close proximity to six totes of sodium methylate 30% (1,500 pounds each) in the Blue Building.

57. The co-location of these chemicals created the risk of fire/explosion and liberation of heat and flammable gases including hydrogen gas, which could occur if the chemicals were accidentally spilled or released and mixed together.[5]

58. The recommended industry practice and standard of care is to segregate and separate incompatible chemicals by a distance of not less than 20 feet. *See, e.g.*, NFPA 1 (2012 ed.) §§ 60.5.1.12, 66.9.17.1.1; CCPS Guidelines § 2.6.

59. On June 25, 2013, Newport Biodiesel sent one of EPA's inspectors an e-mail stating that the methanol and sodium methylate 30% observed together in the Blue Building during EPA's inspection had been "moved … to their respective tanks." A photograph attached to the e-mail showed the storage space void of the containers of methanol and sodium methylate 30%. The e-mail also stated that Newport Biodiesel was changing its ordering procedure so that

[5] The reactivity of chemicals at the facility was predicted through the use of CAMEO Chemicals, an on-line tool designed for people who are involved in hazardous material incident response and planning, and developed by the National Oceanic and Atmospheric Administration's Office of Response and Restoration in partnership with the Environmental Protection Agency's Office of Emergency Management and the U.S. Coast Guard's Research and Development Center.

its inventory would not exceed its tank capacity, which would eliminate any need to store drums or totes of methanol and sodium methylate 30% in the future.

Failure to Properly Store Hazardous Chemicals

60. During EPA Region 1's inspection in June 2013, EPA inspectors observed an approximately 400-gallon tank that was constructed of polyethylene, a flammable material. This tank, designated as Tank T-503 and labeled as "Acid Methanol Mix Tank," routinely contained methanol, a highly flammable liquid.

61. The recommended industry practice and standard of care is for flammable liquid storage tanks to be constructed of steel or other approved noncombustible materials. *See, e.g.*, NFPA 30 (2008 ed.) §§ 9.1.1, 9.4.3;[6] NFPA 1 (2012 ed.) §§ 66.9.4.1, 66.9.4.3; MSH Manual, Chapter 3, p. 26 (citing NFPA 30 and other sources).

62. Newport Biodiesel's PHA listed as a "high priority" recommendation that the Facility explore the elimination of Tank T-503 in order to address potential risks of fire, explosion, injury, property damage or release. The PHA also discussed the risk of fire damage to this plastic tank, which could cause the tank's contents to be released and contribute to a larger fire. *See* PHA, p. 3, Item #3, and pp. 5, 7 (#P5-6).

63. As described above in this Section IV.B, Newport Biodiesel failed to install a fire suppression system, failed to properly label pipes containing flammable or other hazardous substances, failed to separate incompatible chemicals, and failed to properly store hazardous chemicals in the Facility's Blue Building. Accordingly, Newport Biodiesel has failed to design and maintain a safe facility taking such steps as are necessary to prevent accidental releases, as required by the General Duty Clause.

[6] NFPA 30 (2015 ed.) contains comparable citations.

V. NOTICE OF VIOLATION

64. Based on the factual and legal allegations set out in Sections II through IV above, EPA finds that Newport Biodiesel (1) failed to identify hazards which may result from accidental releases of extremely hazardous substances using appropriate hazard assessment techniques, and (2) failed to design and maintain a safe facility taking such steps as are necessary to prevent such releases, as required by the General Duty Clause. Accordingly, EPA finds that Newport Biodiesel has violated the General Duty Clause, Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

VI. ENFORCEMENT

65. At any time, EPA may take any or all of the following actions regarding Newport Biodiesel's above-described violations or any other violations of the General Duty Clause: (a) issue an order requiring compliance with the CAA; (b) issue an administrative penalty order for up to $37,500 per day for each violation; or (c) bring a civil or criminal action seeking an injunction and penalties. *See* Sections 113(a), (b), (c), and (d) of the CAA, 42 U.S.C. §§ 7413(a), (b), (c), and (d), and 40 C.F.R Part 19 (CAA judicial and administrative penalties increased to a maximum of $37,500 for violations occurring after January 12, 2009).

66. If Newport Biodiesel has knowingly violated the requirements of the CAA, Newport Biodiesel and its responsible corporate officers may be subject to criminal penalties under Title 18 of the United States Code, imprisonment for not more than five years, or both. *See* Section 113(c) of the CAA, 42 U.S.C. § 7413(c).

67. Be advised that issuance of this NOV does not preclude EPA from electing to pursue any other remedies or sanctions authorized by law that are available to address these and

other violations. This NOV does not resolve liability for past violations of the CAA or for any violations that continue from the date of this NOV.

VII. OPPORTUNITY TO CONFER

68. If Newport Biodiesel has any questions regarding this NOV, or would like to request a meeting with EPA regarding it, please have your legal counsel contact Steven Viggiani, Senior Enforcement Counsel, at **viggiani.steven@epa.gov** or at (617) 918-1729.

VIII. EFFECTIVE DATE AND APPLICABILITY

69. This NOV is effective as of the date signed below and applies to Newport Biodiesel and its officers, agents, servants, employees, successors, and assigns, and to all persons, firms, and corporations acting under, through, or for Newport Biodiesel. This NOV is not subject to Office of Management and Budget review under the Paperwork Reduction Act, 44 U.S.C. Chapter 35.

Susan Studlien

Susan Studlien, Director
Office of Environmental Stewardship
EPA Region I – New England

03/12/15
Date